

EAEC-EOC TASK FORCE

*Η κινητήρια δύναμη για εξασφάλιση χρηματοδότησης
από Ευρωπαϊκά Προγράμματα*

ΟΙ ΣΥΝΕΡΓΑΤΕΣ





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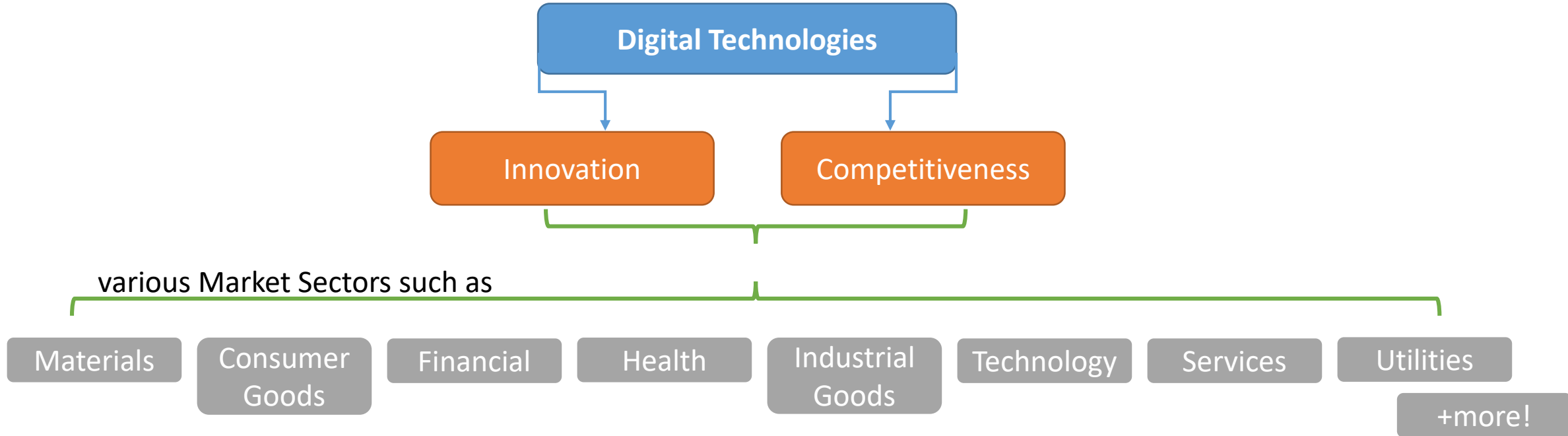
Information and Communication Technologies (ICT)

Horizon 2020 Work Programme 2016-2017

ΟΙ ΣΥΝΕΡΓΑΤΕΣ

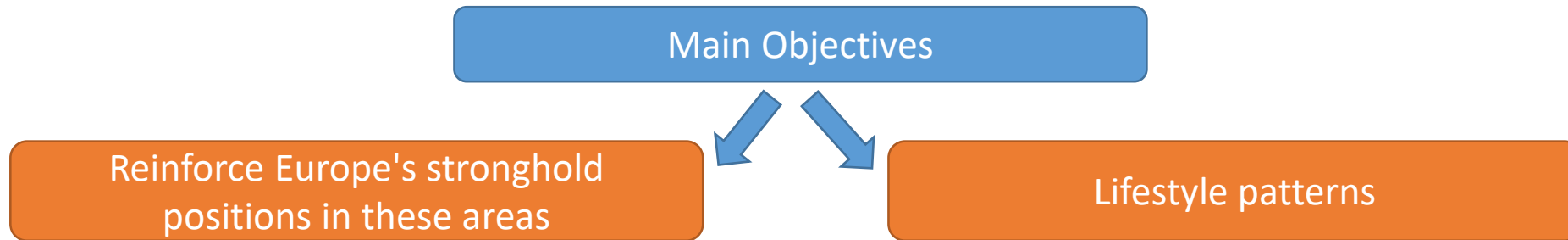
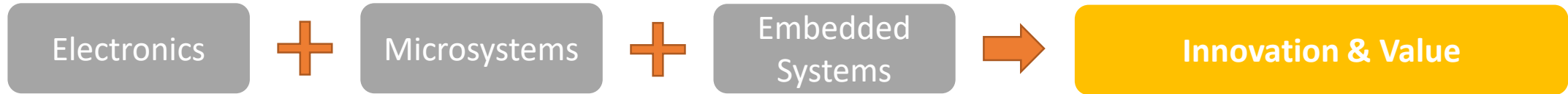


Information and Communication Technologies



The topics addressed in this Work Programme part cover the ICT technology in a comprehensive way, from *key enabling technologies* to *networking technologies*, *robotics*, *content* and *information management technologies*.

A new generation of components and systems





Call: Information and Communication Technologies Call

Open Calls:

Topic Identifier	Topic Name
ICT-04-2016	Smart Anything Everywhere Initiative
ICT-07-2016	5G PPP Research and Validation of critical technologies and systems
ICT-08-2016	5G PPP Convergent Technologies
ICT-09-2016	Networking research beyond 5G
ICT-19-2017	Media and content convergence

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Call: Information and Communication Technologies Call

Forthcoming Calls:

Topic Identifier	Topic Name
ICT-05-2016	Customised and low energy computing (including Low power processor technologies)
ICT-11-2017	Collective Awareness Platforms for Sustainability and Social Innovation
ICT-14-2016-2017	Big Data PPP: cross-sectorial and cross-lingual data integration and experimentation
ICT-15-2016-2017	Big Data PPP: Large Scale Pilot actions in sectors best benefitting from data-driven innovation
ICT-16-2017	Big data PPP: research addressing main technology challenges of the data economy
ICT-17-2016-2017	Big data PPP: Support, industrial skills, benchmarking and evaluation
ICT-20-2017	Tools for smart digital content in the creative industries
ICT-23-2017	Interfaces for accessibility
ICT-25-2016-2017	Advanced robot capabilities research and take-up

Call: Information and Communication Technologies Call

Forthcoming Calls (cont.):

Topic Identifier	Topic Name
ICT-27-2017	System abilities, SME & benchmarking actions, safety certification
ICT-28-2017	Robotics Competition, coordination and support
ICT-30-2017	Photonics KET 2017
ICT-31-2017	Micro- and nanoelectronics technologies
ICT-32-2017	Startup Europe for Growth and Innovation Radar
ICT-33-2017	Innovation procurement networks
ICT-39-2016-2017	International partnership building in low and middle income countries
ICT-40-2017	Reinforcing European presence in international ICT standardisation
ICT-41-2017	Next Generation Internet

Smart Anything Everywhere Initiative

Open

- Topic Identifier: **ICT-04-2017**
- Types of action: **CSA Coordination & support action , IA Innovation action**
- Deadline: **08 November 2016 17:00:00 (CET)**
- Est. Budget: **7 mil. EUR (IA) | 1 mil. EUR (CSA)**

a. Innovation Actions should address all of the following three aspects.

- Establishing across Europe networks of multidisciplinary competence centres offering one-stop shops/marketplaces for companies that want to experiment with digital technologies inside their products
- Carrying out a critical mass of cross-border experiments bringing together different key actors along the full value chain to customise the technologies according to the requirements of the users
- Activities to achieve long-term sustainability of one-stop shop / market place services by the competence centres and the eco-system.

b. Coordination and Support actions' aim is to **reinforce the collaboration** between the actions supported under this initiative, to **increase the outreach** of these actions and their **impact** and to **achieve a wider coverage of stakeholders** in technological, application, and innovation terms

5G PPP Research and Validation of critical technologies and systems

Open

- Topic Identifier: **ICT-07-2017**
- Types of action: **CSA Coordination & support action , RIA R&I action**
- Deadline: **08 November 2016 17:00:00 (CET)**
- Est. Budget: **5-8 mil. EUR (RIA) | 3 mil. EUR (CSA)**

a. Research and Innovation Actions should address all of the following three strands.

- **Strand 1** covers wireless access and radio network architecture/technologies
- **Strand 2:** High capacity elastic - optical networks
- **Strand 3** covers the "Software Network"

b. Coordination and Support actions' activities will ensure a sound programmatic view of the implemented 5G Research and Innovation Actions (RIA) and Innovation Actions (IA) results.

5G PPP Convergent Technologies

Open

- Topic Identifier: **ICT-08-2017**
- Types of action: **CSA Coordination & support action , IA Innovation action**
- Deadline: **08 November 2016 17:00:00 (CET)**
- Est. Budget: **5-8 mil. EUR (RIA) | 2,5 mil. EUR (CSA)**

a. Innovation Actions should address all of the following strands.

- **Strand 1:** Ubiquitous 5G access leveraging optical technologies
- **Strand 2:** Flexible network applications

b. Coordination and Support actions' takes advantage of the supporting 5G research and demonstration facilities offered by Taiwan towards collaborative 5G research with the EU, and aims at developing and demonstrating an integrated convergent access across different air interface technologies

Networking research beyond 5G

Open

- Topic Identifier: **ICT-09-2017**
- Types of action: **RIA Research and Innovation action**
- Deadline: **08 November 2016 17:00:00 (CET)**
- Est. Budget: **2-3 mil. EUR**

Proposals may cover one or more of the themes identified below.

- **Scientific and technology advances** for novel use of the spectrum potential
- **Advanced signal processing**, antenna processing, information theory and coding to optimize and reach Tbit/s in wireless communications.
- **Demand-attentive and cooperation networking** alternative to 5G architectures

Media and content convergence

Open

- Topic Identifier: **ICT-19-2017**
- Types of action: **CSA Coordination & support action , IA Innovation action**
- Deadline: **08 November 2016 17:00:00 (CET)**
- Est. Budget: **2-4 mil. EUR (IA) | 1 mil. EUR (CSA)**

a. Innovation Actions: opportunities for new personal and immersive experiences such as:

- Exploiting synergies between the participation of individuals connected through social media and the convergence environment
- Developing immersive and pervasive solutions for increased personalised user experience in content consumption in order to meet new user expectations
- Facilitating the convergence process to enable the interaction with content on any device, anywhere, anytime in a multiplatform scenario.
- Development and advancement of accessibility solutions specifically for converging media and content.

b. Coordination and Support actions on Convergence and Social Media:

- Facilitate research and policy exchange in Convergence and Social Media
- Support R&D programmes/activities, dissemination of results and organisation of scientific and/or policy events in Convergence and Social Media



Customised and low energy computing (incl. lowpower processor technologies)

- Topic Identifier: **ICT-05-2017**
- Types of action: **CSA Coordination & support action , RIA R&I action**
- Deadline: **25 April 2017 17:00:00 (CET)**
- Est. Budget: **4-6 mil. EUR (RIA) | 1 mil. EUR (CSA)**

Forthcoming

a. Research & Innovation Actions:

- Programming environments and toolboxes for low energy and highly parallel computing
- Low power processor technologies

b. Coordination & Support actions on Convergence & Social Media for structuring & connecting the European academic & industrial research & innovation communities.

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Collective Awareness Platforms for Sustainability and Social Innovation

- Topic Identifier: **ICT-11-2017**
- Types of action: **CSA Coordination & support action , IA Innovation action**
- Deadline: **25 April 2017 17:00:00 (CET)**
- Est. Budget: **1-2 mil. EUR (IA) | 0,2-0,8 mil. EUR (CSA)**

Forthcoming

a. Innovation Actions: pilots of Collective Awareness Platforms (CAPs) demonstrating new forms of bottom-up innovation and social collaboration exploiting digital hyper-connectivity and collaborative tools based on open data, open knowledge, open source software and open hardware, harnessing crowdsourcing or crowdfunding models.

b. Coordination & Support actions to coordinate and support the CAPs initiative and the underlying broader digital social innovation constituency, by identifying links and synergies among different projects, and ensuring visibility and contacts at European and international level.

ΟΙ ΣΥΝΕΡΓΑΤΕΣ



Big Data PPP: cross-sectorial and cross-lingual data integration and experimentation

Forthcoming

- Topic Identifier: **ICT-14-2017**
- Types of action: **IA Innovation action**
- Deadline: **25 April 2017 17:00:00 (CET)**
- Est. Budget: **1-3 mil. EUR**

Proposals should cover one of the following bullets:

- Data integration activities will address data challenges in cross-domain setups, where similar contributions of data assets will be required by groups of EU industries that are arranged along data value chains.
- Data experimentation incubators should address big data experimentation in a cross-sectorial, cross lingual and/or cross-border setup.



Big Data PPP: Large Scale Pilot actions in sectors best benefitting from data-driven innovation

Forthcoming

- Topic Identifier: **ICT-15-2017**
- Types of action: **RIA Research and Innovation action**
- Deadline: **25 April 2017 17:00:00 (CET)**
- Est. Budget: **10-15 mil. EUR**

Large Scale Pilot actions should address domains of strategic importance for EU industry and carry out large scale sectorial demonstrations which can be replicated and transferred across the EU and in other contexts.



Big data PPP: research addressing main technology challenges of the data economy

Forthcoming

- Topic Identifier: **ICT-16-2017**
- Types of action: **RIA Research and Innovation action**
- Deadline: **25 April 2017 17:00:00 (CET)**
- Est. Budget: **2-5 mil. EUR**

Actions are expected to address cross-sector and cross-border problems or opportunities of clear industrial significance. These will include (but are not limited to):

- Software stacks designed to help programmers and big data practitioners take advantage of novel architectures in order to optimise Big Data processing tasks;
- Distributed data and process mining, predictive analytics and visualization at the service of industrial decision support processes;
- Real-time complex event processing over extremely large numbers of high volume streams of possibly noisy, possibly incomplete data.

Big data PPP: Support, industrial skills, benchmarking and evaluation

Forthcoming

- Topic Identifier: **ICT-17-2017**
- Types of action: **RIA Research and Innovation action**
- Deadline: **25 April 2017 17:00:00 (CET)**
- Est. Budget: **2-5 mil. EUR**
- The benchmarking action will identify specific data management and analytics technologies of European significance, define benchmarks and organise evaluations that allow following their certifiable progress on performance parameters (including energy efficiency) of industrial significance

Tools for smart digital content in the creative industries

Forthcoming

- Topic Identifier: **ICT-20-2017**
 - Types of action: **RIA Research and Innovation action**
 - Deadline: **25 April 2017 17:00:00 (CET)**
 - Est. Budget: **2-4 mil. EUR**
- Actions under this topic will explore novel ways of digital content production and management in the creative industries such as advertising, architecture, performing and visual arts, craft, design, fashion, films, music, press, publishing, radio, TV and video games.
 - Proposals should clearly specify which sector(s) of the Creative Industries are being addressed and demonstrate a significant progress beyond the current state of the art

Interfaces for accessibility

Forthcoming

- Topic Identifier: **ICT-23-2017**
- Types of action: **IA Innovation action & RIA Research and Innovation action**
- Deadline: **25 April 2017 17:00:00 (CET)**
- Est. Budget: **2 mil. EUR (IA & RIA)**

a. Research and Innovation Actions

- Support the development of intelligent, affordable and personalised interfaces and affective computing for people with cognitive disabilities
- Develop and test solutions, models and algorithms to improve (and act upon) information extraction from brain and neural signals

b. Innovation Actions

Building on ongoing efforts, develop and demonstrate decision support tools for the assessment of compliance to web sites accessibility standards and guidelines.

Advanced robot capabilities research and take-up

Forthcoming

- Topic Identifier: **ICT-25-2017**
- Types of action: **IA Innovation action & RIA Research and Innovation action**
- Deadline: **25 April 2017 17:00:00 (CET)**
- Est. Budget: **2-4 mil. EUR (IA & RIA)**

a. Research and Innovation Actions addressing generic advances and technical capabilities

- Open, generic forward-looking research into novel technical advances in robotics – open to all robotics-related research topics and disciplines
- Technology research and development to achieve step changes in the capabilities of the following high priority RAS technologies

b. Innovation Actions

- Improving the deployment prospects of RAS through end user-driven application developments in domains and application areas with significant market potential.

System abilities, SME & benchmarking actions, safety certification

Forthcoming

- Topic Identifier: **ICT-27-2017**
- Types of action: **IA & RIA & PCP Pre-Commercial Procurement**
- Deadline: **25 April 2017 17:00:00 (CET)**
- Est. Budget: **see below**

a. Research and Innovation Actions on system abilities (2-4 mil. EUR):

RIAs will focus on advancing the state of the art in the level of smart robotics system abilities. The focus is on the technical challenges

b. Research and Innovation Actions (5-8 mil. EUR) for SME-based research and for benchmarks. This activity will stimulate SMEs in the robotics sector to develop novel and challenging technology and systems applicable to new markets.



System abilities, SME & benchmarking actions, safety certification

c. Innovation Actions (6-11 mil. EUR) on shared facilities for safety certification:

Development of testing protocols for shared space cooperative and collaborative systems leading to viable safety certification standards.

d. Pre-commercial Procurement Actions (5-7 mil. EUR)

Demand-driven PCP actions will be pursued in the area of smart cities. Actions will aim at but not be limited to one or several of the following topics: waste management, transport (with focus on smart mobility), the provision of city-wide utilities and services, the provision of healthcare, social care and education (including social innovation).

ΟΙ ΣΥΝΕΡΓΑΤΕΣ





Robotics Competition, coordination and support

Forthcoming

- Topic Identifier: **ICT-28-2017**
- Types of action: **CSA Coordination and support action**
- Deadline: **25 April 2017 17:00:00 (CET)**
- Est. Budget: **3 mil. EUR**

Coordination and Support Actions focusing on one or more of the following topic areas and taking into account ongoing actions:

- a. Non-technical barriers to robotics take-up
- b. Standards and Regulation
- c. Community support and outreach
- d. Competitions

ΟΙ ΣΥΝΕΡΓΑΤΕΣ



Photonics KET 2017

- Topic Identifier: **ICT-30-2017**
- Types of action: **CSA, IA, RIA**
- Deadline: **25 April 2017 17:00:00 (CET)**
- Est. Budget: **see below**

Forthcoming

a. Research and Innovation Actions should demonstrate strong industrial commitment, be driven by user needs and concrete exploitation strategies, and they should cover the value/supply chain as appropriate. They should address manufacturability and include standardisation activities as appropriate. Focus is on one of the following themes:

- i. Application driven core photonic technology developments **(3-4 mil. EUR)**
- ii. Photonic integrated circuit (PIC) technology **(6-8 mil. EUR)**
- iii. Disruptive approaches to optical manufacturing by 2 and 3 D opto-structuring **(6-8 mil. EUR)**

b. Innovation Actions should focus is on one of the following themes:

- i. Innovation Incubator for SMEs **(8-10 mil. EUR)**
- ii. Application driven core photonic devices integrated in systems **(6-8 mil. EUR)**

c. Coordination and Support actions

the objective is to support the development and implementation of a comprehensive industrial strategy for photonics in Europe. The action should include

- i. the development of strategic technology road-maps,
- ii. strong stakeholder engagement National Technology Platforms,
- iii. coordination of regional,
- iv. national and European strategies and priorities,
- v. and development of financial models and
- vi. financial engineering to facilitate access to different sources of financing.

Forthcoming

- Topic Identifier: **ICT-31-2017**
- Types of action: **CSA, IA, RIA**
- Deadline: **25 April 2017 17:00:00 (CET)**
- Est. Budget: **see below**

a. Research and Innovation Actions The work must be in the scope of one of the following topics (2-4 mil. EUR):

- the development of new approaches to scale functional performance of information processing and storage substantially beyond the state-of-the-art technologies
- 3D sequential integration (at transistor scale) possibly mixed with 3D parallel integration (at circuit level) for system solutions to increase functionalities and capabilities

b. Innovation Actions (1-2 mil. EUR)

In **Equipment Assessment Experiments**, suppliers of innovative high-tech equipment install, assess and validate their prototypes or products that have left the R&D phase in environments that are very close to real-life conditions in cooperation with end-user

c. Coordination and Support actions (0,5 mil. EUR)

In view of promoting the attractiveness of careers in micro/nanoelectronics towards young people, a dedicated pan-European challenge event should be proposed to showcase the possibilities offered by state-of-the-art hardware technologies.

Startup Europe for Growth and Innovation Radar

Forthcoming

- Topic Identifier: **ICT-32-2017**
- Types of action: **CSA Coordination and support action, IA Innovation action**
- Deadline: **25 April 2017 17:00:00 (CET)**
- Est. Budget: **1,5 mil. EUR (IA) | 1 mil. EUR (CSA)**

a. Innovation Actions Proposers should cover one or both of the following themes:

- Reinforcing ICT ecosystems for high growth tech startups by interconnecting and creating new synergies between 3-4 different Startup hubs across Europe per project
- Facilitating financing and improving the liquidity for European investments in fast growing ICT startups and scaleups, increasing their chances for a successful exit

b. Coordination and Support actions These actions shall primarily be targeted towards technologies developed in EU funded ICT projects, offering tailored support to innovators in order to turn their research results into marketable products and, preparing such innovators for success in the market place

Innovation procurement networks

Forthcoming

- Topic Identifier: **ICT-33-2017**
- Types of action: **CSA Coordination and support action**
- Deadline: **25 April 2017 17:00:00 (CET)**
- Est. Budget: **1-2 mil. EUR**

Proposals should focus on one of the two themes below:

- a. The objective is to support the creation of European wide networks of procurers (European Public Procurers networks) that define together an innovation procurement roadmap
- b. The objective is to support the creation of one EU wide network of national competence centers on innovation procurement (PCP and PPI)



International partnership building in low and middle income countries

- Topic Identifier: **ICT-39-2016-2017**
- Types of action: **IA Innovation action**
- Deadline: **25 April 2017 17:00:00 (CET)**
- Est. Budget: **1-2 mil. EUR**

Forthcoming

Actions will address the requirements of end-user communities in developing countries. This may include technological improvements and adaptations as well as innovative service creation based on existing technologies.

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Reinforcing European presence in international ICT standardisation

- Topic Identifier: **ICT-40-2017**
- Types of action: **CSA Coordination and support action**
- Deadline: **25 April 2017 17:00:00 (CET)**
- Est. Budget: **2 mil. EUR**

Forthcoming

The proposal is expected to reinforce the EU presence in the international ICT standardisation scene, by:

- Monitoring and gathering information regarding the on-going work from the relevant international and global standards developing organisations (SDOs), fora and consortia,
- To set up and manage a facility to support participation of key European specialists (especially from SMES and Academia) in key SDOs to push for European requirements and promote broader European interest.

ΟΙ ΣΥΝΕΡΓΑΤΕΣ



Next Generation Internet

- Topic Identifier: **ICT-41-2017**
- Types of action: **CSA Coordination and support action**
- Deadline: **25 April 2017 17:00:00 (CET)**
- Est. Budget: **0,7 mil. EUR**

Forthcoming

Proposals should cover one of the three bullet points

a) Coordination and Support action - Identification of research topics

Design, build and apply a methodology to identify continuously those key future technologies that will support an Internet model more open and more inclusive

b) Coordination and Support action - Dynamic and continuous consultation

Build an open, dynamic and continuous consultation process which engages all relevant stakeholders in a long-term and multi-disciplinary fashion.

c) Coordination and Support action - A programme shape for of a Next Generation Internet initiative.

This initiative will mobilise the best researchers and focus on a continuous scouting of developments with the potential to change the way the Internet is operated, often by an opportunistic and multidisciplinary combination of advances



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Thank you for your attention!

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